

Siddharth Dangwal

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EDUCATION

The University of Chicago <i>Ph.D. in Computer Science</i>	2021-2027 (expected)
Indian Institute of Technology Delhi <i>Bachelor Of Technology in Electrical Engineering, Specialization in Cognitive Science</i>	2017-2021 9.554/10.000

INDUSTRY EXPERIENCE

PhD Research Intern <i>IBM Research</i>	June 2023 - September 2023
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PUBLICATIONS AND PREPRINTS

- Siddharth Dangwal**, Tina Oberoi, Ajay Sailopal, Dhirpal Shah, and Frederic T. Chong - Noisy Quantum Simulation Using Tracking, Uncomputation and Sampling - (ISCA 2026)[link](#)
- Siddharth Dangwal**, Suhas Vittal, Lennart Maximillian Seifert, Frederic T. Chong and Gokul Subramanian Ravi - Variational Quantum Algorithms in the era of Early Fault Tolerance - (ISCA 2025)[link](#)
- Joshua Visslai, Sophia Fuhui Lin, **Siddharth Dangwal**, Conor Bradley, Vikram Ramesh, Jonathan Baker, Hanner Bernien, and Frederic T. Chong - Interleaved Logical Qubits in Atom Arrays - (HPCA 2025) [link](#)
- Lennart Maximillian Seifert, **Siddharth Dangwal**, Frederic T. Chong, and Gokul Subramanian Ravi - Clapton: Clifford-Assisted Problem Transformation for Error Mitigation in Variational Quantum Algorithms - (ASPLOS 2025) [link](#)
- Siddharth Dangwal**, Gokul Subramanian Ravi, Lennart Maximilian Seifert, Poulami Das, James Sud, and Frederic T. Chong - COMPASS: Compiler Pass Selection For Improving Fidelity Of NISQ Applications - (ICRC 2024) [link](#)
- Siddharth Dangwal**, Gokul Subramanian Ravi, Poulami Das, Kaitlin N. Smith, Jonathan M. Baker, and Frederic T. Chong - VarSaw: Application-tailored Measurement Error Mitigation for Variational Quantum Algorithms - (ASPLOS 2024) [link](#)
- Ji Liu, Max Bowman, Pranav Gokhale, **Siddharth Dangwal**, Jeffrey Larson, Frederic T Chong, and Paul D Hovland - QContext: Context-Aware Decomposition for Quantum Gates - (ISCAS 2023) [link](#)
- Poulami Das, Swamit Tannu, **Siddharth Dangwal**, and Moinuddin Qureshi - ADAPT: Mitigating Idling Errors in Qubits via Adaptive Dynamical Decoupling-(MICRO 2021) [link](#)
- Siddharth Dangwal**, Ritvik Sharma and Debanjan Bhowmik-An Algorithm for Fast Supervised Learning in Variational Circuits through Simultaneous Processing of Multiple Samples-(Quantum Information Processing 21 (5), 189)[link](#)
- Saurabh Kumar, **Siddharth Dangwal**, Soumik Adhikary, and Debanjan Bhowmik-A Quantum Activation Function for Neural Networks: Proposal and Implementation-(IJCNN 2021) [link](#)
- Soumik Adhikary, **Siddharth Dangwal**, and Debanjan Bhowmik-Supervised learning with a quantum classifier using a multi-level system-(Quantum Information Processing 19 (3), 89) [link](#)

TALKS

1. COMPASS: Compiler Pass Selection For Improving Fidelity Of NISQ Applications - APS March Meeting 2024 - Minneapolis (MN), USA
2. VarSaw: Application-tailored Measurement Error Mitigation for Variational Quantum Algorithms - ASPLOS 2024 - San Diego (CA), USA
3. COMPASS: Compiler Pass Selection For Improving Fidelity Of NISQ Applications - ICRC 2024 - San Diego (CA), USA
4. Variational Quantum Algorithms in the era of Early Fault Tolerance - ISCA 2025 - Tokyo, Japan

TEACHING EXPERIENCE

1. **Co-Instructor** for the undergraduate course “Quantum Computing Systems” at University of Chicago. (March 2025 - June 2025)
2. **Teaching assistant** for the undergraduate course “Computer Architecture” at University of Chicago. (September 2022 - December 2022)
3. **Teaching assistant** for the undergraduate course “Data Structures in C” at University of Chicago. (January 2022 - March 2022)
4. **Teaching assistant** for the undergraduate course “Control Engineering” at IIT Delhi. (February 2021 - May 2021)
5. **Teaching assistant** for the undergraduate course “Signals and systems” at IIT Delhi. (September 2020 - January 2021)

AWARDS AND ACHIEVEMENTS

1. CAFQA: 2023 Innovation Award, Quantum Computing for Drug Discovery Challenge at ICCAD
2. Awarded the Crerar Fellowship by The University of Chicago
3. Awarded Summer Undergraduate Research Award for outstanding research at undergraduate level at IIT Delhi.
4. Awarded semester merit award for being in the top 7% of the class in semesters 1,2 3, 4, and 8 at IIT Delhi.
5. Awarded KVPY fellowship by the Indian Institute Of Science, Bangalore.
6. Awarded National Talent Search scholarship by National Council of Education, Research and Training, India.

SERVICE

1. Program Committees - QCE 2024, QCE 2025, HPCA 2026
2. Workshops - “I too can Quantum (I2Q)!” workshop @ ISCA 2024, Planning Workshop on Quantum Computing (PlanQ) held at ASPLOS 2024, “Device aware quantum software” workshop @ QCE 2025